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Case Report

An extremely rare association of Sweet's syndrome with active pulmonary tuberculosis

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ABSTRACT

Sweet's syndrome is a skin manifestation of various systemic infections, drugs, malignancies and autoimmune disorders. There are very few case reports describing the relationship between Sweet's syndrome and non-tubercular mycobacterium infection. Further development of Sweet's syndrome secondary to mycobacterium tuberculosis (active pulmonary tuberculosis) is extremely uncommon and this is the second well established case reported from India. Here we report a forty eight year old man who presented with multiple erythematous and tender plaques over neck, palms and sides of soles. He also had high grade fever, headache, myalgias, cough, chest pain and difficulty in breathing. With clinical possibilities of (1) Sweet's syndrome with pulmonary involvement and (2) Sweet's syndrome secondary to pulmonary infection, we send the skin biopsy for histopathological examination and also advised routine laboratory plus imaging investigations to find out the underlying cause. Clinical and lab parameters together with the biopsy report fulfilled the diagnostic criteria for Sweet's syndrome. Further chest X-ray findings, demonstration of acid fast bacilli of mycobacterium tuberculosis on sputum smear microscopy and MGIT report confirmed the diagnosis of pulmonary tuberculosis. Patient was put on colchicine and standard anti-tubercular drugs. Significant improvement was noticed in skin lesions within five days of treatment and no recurrence has been seen for the past six months.

1. Introduction

Sweet's syndrome is a multisystem inflammatory disorder characterized by sudden onset of high grade fever, typical skin lesions and dense dermal neutrophilic infiltrate on histopathology. Fever, arthritis and conjunctivitis are common systemic features of Sweet's syndrome but pulmonary involvement is quite rare.[1] In most (70%) cases, this syndrome is idiopathic but its frequent associations include infections, pregnancy, inflammatory disorders and malignancies. Amongst infections, occurrence of Sweet's syndrome with mycobacterium infection is uncommon, only few case reports of non-tubercular mycobacterium infection or extra-pulmonary tubercular infection are there.[2] Further the reporting of active pulmonary tuberculosis and Sweet's syndrome is extremely uncommon with only a single case reported from India.[3] If a patient of Sweet's syndrome present with

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pulmonary symptoms it is very important to differentiate whether lung involvement is due to underlying infective cause or due to pulmonary Sweet's itself. Usually systemic corticosteroids are treatment of choice for Sweet's syndrome but they are contra-indicated in active pulmonary tuberculosis. In developing countries like India where tuberculosis is endemic, active screening must be done for mycobacterium infection. Alternative drugs like colchicine, dapsone, clofazamine, potassium iodide and indomethacin should be preferred over steroids in such cases.

2. Case report

A 48-year-old man presented to us with fever, body-aches and multiple red raised painful skin lesions over neck, palms and soles for a period of three days. Previous records revealed that fifteen days earlier patient was treated for fever, cough and chest pain with antibiotics (cefpodoxime) and antipyretics. He had marked improvement in fever and chest pain after medication. But shortness of breath and cough was persistent, which further deteriorated after appearance of the skin lesions. He gave the history of intermittent productive cough for 5–6 months but he denied for associated haemoptysis or weight loss or loss of appetite. There was no history of preceding drug intake, alteration of bowel or urinary habits or any other systemic complaint. On examination patient was febrile, dyspnoeic, sick looking with pulse rate 112/min, respiratory rate 24/min and fever 38 °C. Cutaneous examination revealed multiple well defined erythematous and tender plaques over neck, palms and soles (Figs. 1 and 2). Pulmonary and other systems were normal on examination. With clinical possibilities of (1) Sweet's syndrome with pulmonary involvement and (2) Sweet's syndrome secondary to underlying pulmonary infection, skin biopsy was taken and simultaneously routine investigations were sent to find out the associated diseases. Laboratory investigations showed Hb 11 g/dl, WBCs 13,000/μl, neutrophils 76%, positive C reactive protein and elevation of ESR to 46 mm/h. Tests for HIV, hepatitis were non-reactive and further blood sugar level, urine microscopy, hepatic and renal profile were unremarkable. Although his montoux test was non-contributory but chest X-ray revealed cavities in right upper lobe along with bilateral patchy infiltrates (Fig. 3). Further reporting of acid fast bacilli on sputum microscopy and specific demonstration of mycobacterium tuberculosis bacilli on MGIT confirmed the diagnosis of pulmonary tuberculosis. Histological examination showed dense neutrophillic infiltrate within the edematous dermis with no evidence of leucocytoclastic vasculitis (Fig. 4). Thus the diagnosis of Sweet's syndrome secondary to sputum positive pulmonary tuberculosis was established and patient was put on standard anti-tubercular drugs along with colchicine 0.5 mg three times daily doses. Significant improvement was noticed in skin lesions within five days and patient recovered completely in a period of four weeks. We stopped colchicines in a period of three months after tapering its doses from thrice daily to once daily schedule.

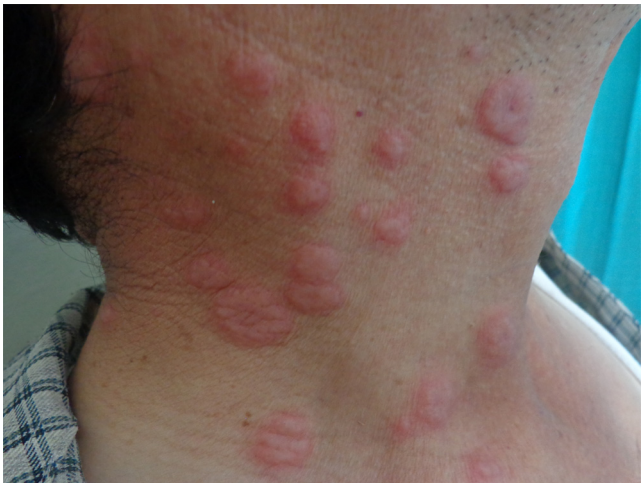

Fig. 1 – Multiple erythematous plaques with central vesiculation at places over neck.

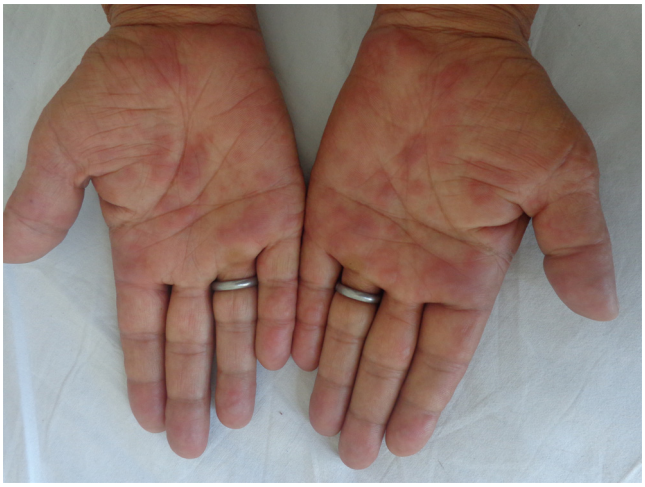

Fig. 2 – Multiple erythematous and tender plaques over palms in a patient of Sweet's syndrome.

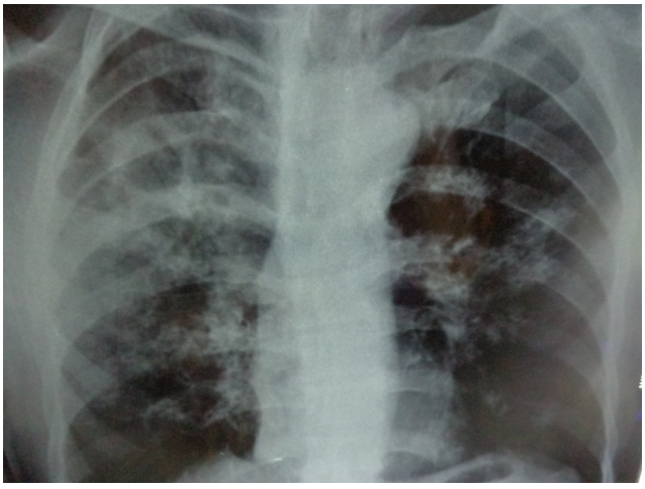

Fig. 3 – X-ray chest showing cavitary lesions in right upper lobe and bilateral patchy infiltrates.

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